

	ENTR MOTE AD	OTE INDEX RY FOR DDRESS 1A T INDEXES		MULTI-MOTE INDEX ENTRY FOR - MOTE ADDRESS 3A CONTENT INDEXES					
			- WEEV		MOTE 3A: SENSING INDEX				
Light Device		Query Command Format	Output Format	Pressure Device	Pressure Query Output Device Command Format Information Format Available				
Electrical/ Magnetic Device	Electrical/ Magnetic Device	Query Command Format	Output Format	Temp. Device	Temp. Query Output Device Command Format Information Format Available				
Inertial Device	Information Available Inertial Device	Query Command	Output Format	Valume Device	Volume Query Output Device Command Format Information Format Available				
Antenna	Information Available Antenna Information	Query	Output Format	Antenna	Antenna Query Output Information Command Format Available Format				
	Available	Format			MOTE 3A: CONTROL INDEX				
Light Sensor	Light Device Commands Available	1A: CONTROL Control Command Format	Feedback Format	Pressure Device	Pressure Control Feedback Device Command Format Commands Format Available				
Electrical/ Magnetic Device		Control Command Format	Feedback Format	Temp. Device .	Temp. Control Feedback Device Command Format Commands Format Available				
Inertial Device	Device Commands	Control Command Format	Feedback Format	Volume Device	Volume Control Feedback Device Command Format Commands Format Available				
Antenna	Available Antenna Commands Available	Control Command Format	Feedback Format	Antenna	Antenna Control Feedback Commands Command Format Available Format				
14-1-		ROUTING/SP/	ATIAL INDEX Relative	Mote-	MOTE 3A: ROUTING/SPATIAL INDEX Comm. Absolute Relative				
Mote- Network Address 2A	Link Co	osolute oordinates: ong Lat. (e.g., PS)	Coordinates (e.g., 2-d-or 3-d relative to mote 1A location)	Network Address 1A	Link Coordinates: Coordinates Quality of Service: Good Good Coordinates: (e.g., 2-d or 3-d relative to mote 1A location)				
Mote- Network Address 3A	Comm. All Link Commission Commiss	bsolute oordinates: ong Lat. (e.g., PS)	Relative Coordinates (e.g., 2-d or 3-d relative to mote 1A location)	Mote- Network Address 2A	Comm. Link Quality of Service: Fair Absolute Coordinates: Coordinates: Coordinates (e.g., 2-d or 3-d relative to mote 1A location)				
Mote- Network Address 5A	Comm. A Link C Quality of Li	bsolute coordinates: ong Lat. (e.g., SPS)	Relative Coordinates (e.g., 2-d or 3-d relative to mote 1A location)	Mote- Network Address 5A	Comm. Absolute Relative Coordinates: Cog-lat. (e.g., 2-d or 3-d relative to mote Poor Relative to mote 1A location)				
]]			Mote- Network Address 6A	Comm. Absolute Relative Coordinates: Quality of Long Lat. (e.g., Service: GPS) relative for mote TA location)				
4	Newwood.								
502 Mi	ulti-mote Index Cre Base	ation Agent Cre ed on Common Protocol		Multi-mote Registry (e.g., Motes Under Aegis of Multi-Mote Index Creation Agent and/or from Which Multi-Mote Index to be Constructed)					
			-Appropriate Ad Hoo	: Routing Applica	ition (Layer 3)				
· · · · · · · · · · · · · · · · · · ·		***********			119 Antenna Entity 104 Laver 1				
FIG. 5 5/11					Mote Network 550				

MULTI-MOTE CONTENT INDEX **ENTRY FOR** MOTE ADDRESS 1A CONTENT INDEXES

MULTI-MOTE CONTENT INDEX ENTRY FOR MOTE ADDRESS 3A CONTENT INDEXES

MOTE 3A: SENSING INDEX MOTE 1A: SENSING INDEX Output Query Pressure Pressure Light Device Output Light Format Command Device Device Command Format Device Format Information Information Format Available | Available Output Query Temp. Temp. Output Electrical Electrical Query Format Command Device Device Command Format Magnetic Magnetic Format Information Format Available Device Device Output Querv Information Volume Volume Format Command Available Device Device Format Information Output Query Inertial Inertial Format Available | Command Device Device Output Format Antenna Query Information Antenna Format Information Command Available Format Output Available Antenna Query Antenna Format Information Command Available Format MOTE 3A: CONTROL INDEX MOTE 1A: CONTROL INDEX Feedback Pressure Control Pressure Feedback Light Light Device Control Command Format Device Device Command Format Sensor Commands Format Commands Available Format Available Feedback Control Flectrical Feedback Electrical/ Control Temp. Temp. Command Format Format Magnetic Magnetic Command Device Device Format Format Device Commands Device Available Commands Feedback Control Available Volume Volume Format Command Feedback Device Control Device Inertial Inertial Format Format Commands Command Device Device Format Available Commands Feedback Control Available Antenna Antenna Format Commands Command Feedback Antenna Antenna Control Format Format Available Commands Command Available Format MOTE 3A: ROUTING/SPATIAL INDEX MOTE 1A: ROUTING/SPATIAL INDEX Relative Comm. Absolute Mote-Relative Mote-Comm. Absolute Coordinates Link Coordinates: Coordinates Network (e.g., 2-d or 3-d Network Link Coordinates: Long Lat. (e.g., GPS) Quality of (e.g., 2-d or 3-d Long Lat. (e.g., GPS) Address Quality of relative to mote Address Service: relative to mote Service: 1A 1A location) Good 1A location) Good Relative Absolute Mote-Comm. Mote-Absolute Relative Comm. Coordinates Coordinates: Link Network Coordinates Coordinates: (e.g., 2-d or 3-d Network Link Quality of Long Lat. (e.g., (e.g., 2-d or 3-d Address Quality of Long Lat. (e.g., Address relative to mote GPS) Service: 2A relative to mote Service: GPS) 1A location) Fair 1A location) Absolute Relative Mote-Comm. Relative Mote-Absolute Comm Coordinates Coordinates: Network Link Coordinates Coordinates: (e.g., 2-d or 3-d Network 1 ink Long Lat. (e.g. Quality of Address Quality of Long Lat. (e.g., (e.g., 2-d or 3-d Address relative to mote GPS) Service: 5A relative to mote 5A Service: GPS) 1A location) Poor 1A location) Poor Relative Comm. Absolute Mote-Coordinates Coordinates: Network Link (e.g., 2-d or 3-d Quality of Long Lat. (e.g. Address relative to mote Service: GPS) 6A 1A location) Fair

Multi-mote Index Creation Agent Creates Multi-Mote Index (e.g., Based on Common Application Protocol)

Multi-mote Registry (e.g., Motes Under Aegis of Multi-Mote Index Creation Agent and/or from Which Multi-Mote Index to be Constructed)

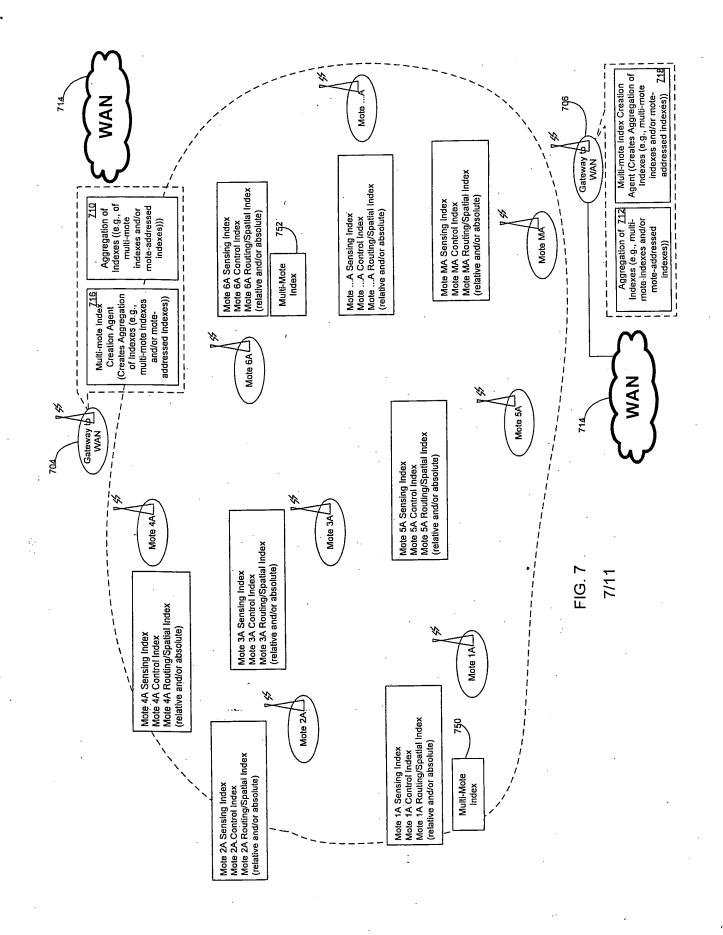
Multi-mote Reporting Entity Reports (Mote Address; Sensing Index; Control Index; and/ or Routing/Spatial Index) to Index Mote/ Gateway Mote - Clones/Crawls to Reachable Motes Based on Routing/Spatial Index

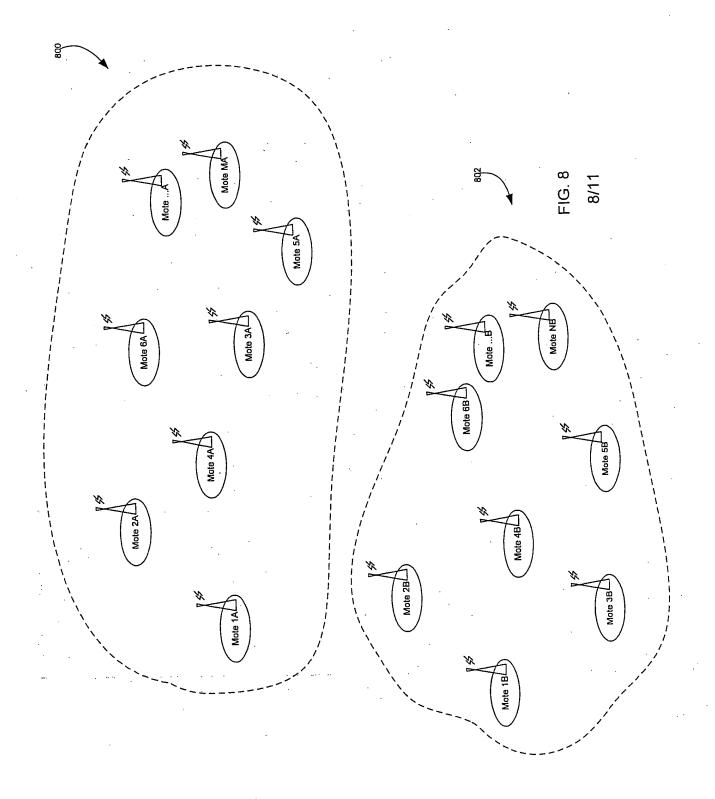
Mote-Appropriate Ad Hoc Routing Application (Layer 3)

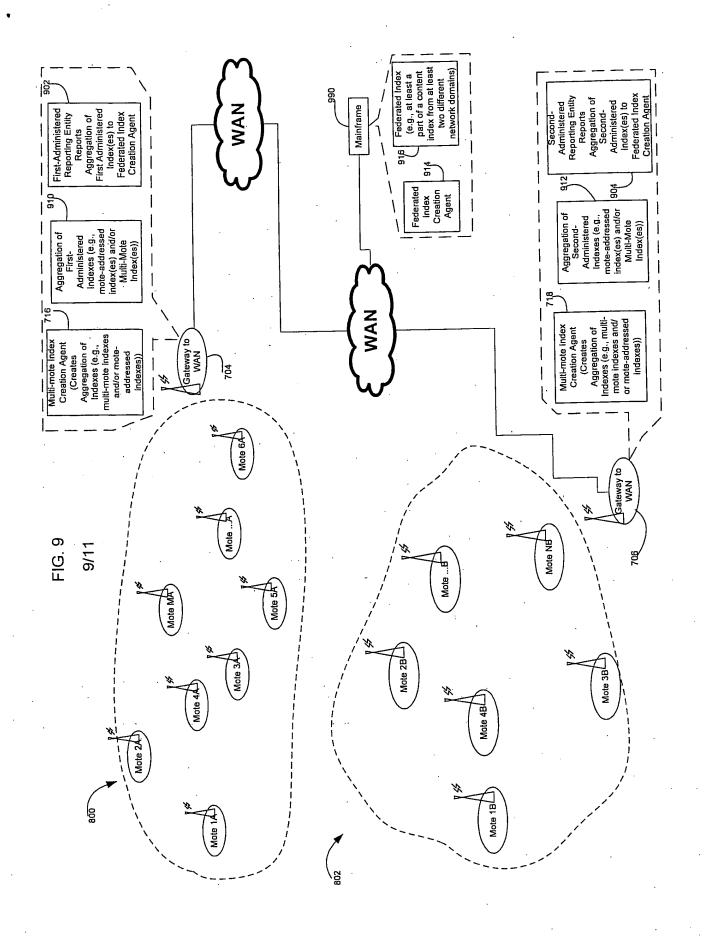
119 104

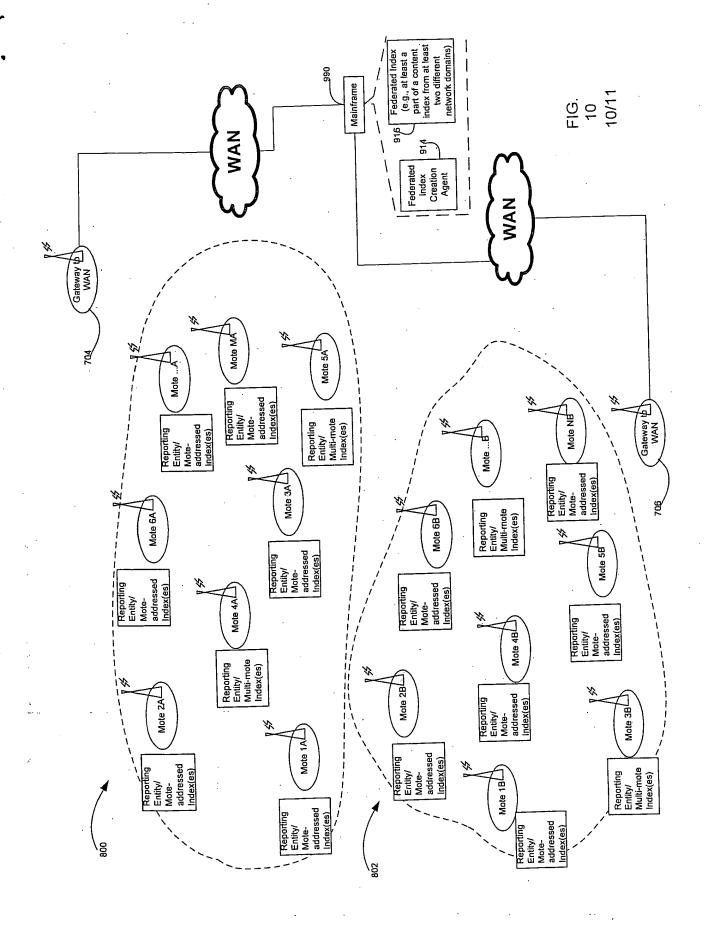
Antenna Entity Layer 1

FIG. 6 6/11









AGGREGATION OF CONTENT INDEXES						t of Motes and Second-Administered Set of Motes AGGREGATION OF CONTENT INDEXES FOR					
FOR MOTE ADDRESSES 1A AND 2A OF FIRST-ADMINISTERED SET OF MOTES						MOTE ADDRESSES 3A AND 4A OF SECOND-ADMINISTERED SET OF MOTES					
MOTE 1A OF FIRST-ADMINISTERED SET OF MOTES: SENSING INDEX						MOTE 3A OF SECOND-ADMINISTERED SET OF MOTES: SENSING INDEX					
Light Device Light Device		Light	Query Command	Output Format		Pressure Device		Pressure Device Information Available	Command on Format	Output Format	
Electrical/ Magnetic Device		Electrical/ Magnetic Device	Command Format	Output Format		Temp. Device		Temp. Device Information Available		Output Format	
Inertial Device			Query Command	Output Format	-	Volume Device		Volume Device Informati Available		Output Format	
Antenna		Information Available Antenna	On Format Query	Output	-	Antenna		Antenna Informati Available		Output Format	
		Informatio Available	Format	Format			'	1			
-	MO.		FIRST-ADMINIS ES: CONTROL	TERED SET OF NDEX				OF M	SECOND-ADMI OTES: CONTRO	LINDEX	
Light Sensor	Cor	nt Device nmands ilable	Control Command Format	Feedback Format		Pressure Device		ressure evice ommands vailable	Control Command Format	Feedback Format	
Electrical/ Magnetic Device	Mag Dev	ctrical/ gnetic vice nmands	Control Command Format	Feedback Format		Temp. Device	Temp. Device		Control Command Format	Feedback Format	
Inertial Device	Iner Dev Cor	vice nmands	Control Command Format	Feedback Format	_	Volume Device		olume evice ommands vailable	Control Command Format		
Antenna	Ant Cor	illable enna nmands illable	Control Command Format	Feedback Format		Antenna	Antenna Commands Available		Control Command Format	Feedback Format	
MOTE 2A OF FIRST-ADMINISTERED SET OF MOTES: ROUTING /SPATIAL INDEX						MOTE 4A OF SECOND-ADMINISTERED SET OF MOTES: ROUTING /SPATIAL INDEX					
Mote- Network Address 2A	Lini Qu	nm. k ality of vice:	Absolute Coordinates: Long Lat. (e.g., GPS)	Relative Coordinates (e.g., 2-d or 3-d relative to mote 1A location)		Mote- Network Address 1A	L G S	omm. ink tuality of ervice: lood	Absolute Coordinates: Long Lat. (e.g., GPS)	Relative Coordinates (e.g., 2-d or 3-d relative to mote 1A location)	
Mote- Network Address 3A	Link C Quality of L		Absolute Coordinates: Long Lat. (e.g., GPS)	Relative Coordinates (e.g., 2-d or 3-d relative to mote 1A location)		Mote- Network Address 2A	L S F	omm. ink tuality of ervice: air	Absolute Coordinates: Long Lat. (e.g., GPS)	Relative Coordinates (e.g., 2-d or 3-d relative to mote 1A location)	
Mote- Network Address 5A	Co Lin Qu	mm. k ality of rvice:	Absolute Coordinates: Long Lat. (e.g., GPS)	Relative Coordinates (e.g., 2-d or 3-d relative to mote 1A location)		Mote- Network Address 5A	L	comm. ink Quality of Service: Poor	Absolute Coordinates: Long Lat. (e.g., GPS)	Relative Coordinates (e.g., 2-d or 3-d relative to mote 1A location)	
		- 1			- -	Mote- Network Address 6A	L	Comm. link Quality of Service: air	Absolute Coordinates: Long Lat. (e.g., GPS)	Relative Coordinates (e.g., 2-d or 3-d relative to mote 1A location)	

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